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EXAMINER	
WEINTROP, ADAM S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,242	STAFFORD ET AL.	
	Examiner	Art Unit	
	Adam S. Weintrop	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8/1/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 4, 15-17, 19, 20-23, 24-28, and 30-31** are objected to because of the following informalities:

Regarding **claim 4**, the word --is-- should be placed after the word "protocol" on line 11 to improve the clarity of the claim.

Regarding **claim 15**, the term "wherein the memory further comprises operational instructions corresponding to" on lines 13-14 should be replaced with --wherein the operational instructions stored in the memory correspond to-- to improve the clarity of the claim language.

Regarding **claim 16**, the term "wherein the memory further comprises operational instructions corresponding to" on lines 17-18 should be replaced with --wherein the operational instructions stored in the memory correspond to-- to improve the clarity of the claim language.

Regarding **claim 17**, the term "wherein the memory further comprises operational instructions corresponding to" on lines 1-2 should be replaced with --wherein the operational instructions stored in the memory correspond to-- to improve the clarity of the claim language. The term "each of the plurality" on line 11 has already been defined and should be replaced with --said each of the plurality-- to clarify the claim language.

Regarding **claim 19**, the term "wherein the memory further comprises operational instructions corresponding to" on lines 17-18 should be replaced with --wherein the

operational instructions stored in the memory correspond to-- to improve the clarity of the claim language.

Regarding **claim 20**, the term “a wireless local area network” on page 30, line 6 has already been defined and should be replaced with --the wireless local area network-- to clarify the claim language.

Regarding **claim 21**, the term “wherein the memory further comprises operational instructions that cause” on lines 11-12 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 22**, the term “wherein the memory further comprises operational instructions that cause” on lines 20-21 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 24**, the term “the transport application” on line 8 has not been defined and should be replaced with --a transport application-- to clarify the claim language.

Regarding **claim 25**, the term “wherein the memory further comprises operational instructions that cause” on lines 1-2 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 26**, the term “wherein the memory further comprises operational instructions that cause” on lines 9-10 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 28**, the term "wherein the memory further comprises operational instructions that cause" on lines 1-2 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 30**, the term "wherein the memory further comprises operational instructions that cause" on lines 18-19 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Regarding **claim 31**, the term "wherein the memory further comprises operational instructions that cause" on lines 4-5 should be replaced with --wherein the operational instructions stored in the memory cause-- to improve the clarity of the claim language.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-3, 5, 7-9, 11-12, 14-17, 19-22, 24-26, and 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur et al. (US 6,122,514) in view of Gwon et al. (US 6,832,087).

Regarding **claim 1**, Spaur et al. anticipates:

A method for interoperability of a network interface protocol with an Internet

interface protocol to ensure a high data throughput, the method comprises:

Receiving a scan channel request of a plurality of channels that are in accordance with the network interface protocol (column 8, lines 4-9, where each network channel is analyzed and column 6, lines 30-32, with the channels being able transfer information relative to the terminal stack, seen as channels that are compliant with the network interface protocol);

Determining whether an Internet packet is being received via one of the plurality of channels when the channel scan request is received (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as a channel scan request);

When the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels (Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as scanning other channels, but not the currently used channel, and column 13, line 67-

column 14, lines 3 where the link selector takes a currently used network channel and switches to a different channel, seen as doing a channel scan only when the one channel is active or receiving packets).

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose tuning back to the first channel to transmit data before going back to scanning for more channels. The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 2**, Spaur et al. and Gwon et al. teach all of the limitations as described above, with Spaur et al. further teaching:

The method of claim 1, wherein the receiving a channel scan request further comprises: periodically receiving the channel scan request from a host device to determine whether another one of the plurality of channels contains data of interest to the host device (column 10, lines 34-38 and column 7, line 41-column 8, line 9, where the link selector transfers old channels to new channels upon changing communication conditions, seen as periodically, and the channels are analyzed to determine if they match certain parameters seen as data of interest).

Regarding **claim 3**, Spaur et al. and Gwon et al. teach all of the limitations as described above, with Spaur et al. further teaching:

The method of claim 1, wherein the determining whether the Internet packet is being received further comprises:

determining that a source of the Internet packet and a destination of the Internet packet have established a Transmission Control Protocol (TCP) connection

(column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and the protocol used is TCP as seen in column 5, lines 61-67).

Regarding **claims 5, 7, 17, 19, 26, and 28**, Spaur et al. and Gwon et al. teach all of the limitations as described above with Spaur et al. further teaching

After scanning the at least another channel of the plurality of channels (column 13, lines 7-15, with the system scanning channels as they become available):

determining whether each of the plurality of channels have been scanned (column 13, lines 7-15, with the system scanning each channel that is available).

Spaur et al. does not disclose tuning back to the first channel to transmit data or receive data as required by claims 7, 19, or 28 before going back to scanning for more channels. All the channels are scanned that are available however (column 13, lines 7-15, where all the available channels are scanned and Figure 5A, Item 182). The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit and receive data to the old agent using

tunnels, seen as using the old channel to transmit or receive data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 8**, Spaur et al. anticipates:

A method for interoperability of a network interface protocol with an Internet Protocol to ensure a high data throughput, the method comprises:

when a Transmission Control Protocol (TCP) connection is established between a source and a destination, receiving a network interface protocol channel scan request (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires

the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as a channel scan request, and the protocol used is TCP as seen in column 5, lines 61-67).

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose hopping back to the first channel to transmit data before going back to scanning for more channels as to reduce latency in packet transmissions of the original network channel during channel scanning. The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target

node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 9**, Spaur et al. and Gwon et al. teach all of the limitations as described above and Spaur et al. further teaches:

The method of claim 8 further comprises periodically receiving the network interface protocol channel scan request from a host device to determine whether another one of the plurality of channels contains data of interest to the host device (column 10, lines 34-38 and column 7, line 41-column 8, line 9, where the link selector transfers old channels to new channels upon changing communication conditions, seen as periodically, and the channels are analyzed to determine if they match certain parameters seen as data of interest).

Regarding **claims 11-12, 21-22, and 30-31**, Spaur et al. and Gwon et al. teach all of the limitations as described above with Spaur et al. further teaching

Iteratively hopping between the scanning of one of the other channels and the channel supporting the TCP connection until each of the other channels has been scanned (column 13, lines 7-15, with the system scanning channels as they become available).

Spaur et al. does not disclose sending or receiving as required by claim 12, 22, or 31 at least one new datagram while tuned to the channel supporting the TCP connection. The general concept of continuing a transmission or reception while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit and receive data to the old agent using tunnels, seen as using the old channel to transmit or receive data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency

associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 14**, Spaur et al. anticipates:

A communication device comprises:

Wireless network interface module to provide connectivity to a wireless local area network (WLAN) in accordance with at least one wireless network interface protocol, wherein the WLAN is coupled to an Internet, and wherein the connectivity is provided via one of a plurality of channels of the WLAN (column 6, lines 30-32, and lines 9-15, with a wireless device communicating on a variety of network interfaces, seen as channels, and they can communicate using an Internet protocol, seen as using a interface protocol and being coupled to an Internet);

Processing module operably coupled to transceive datagrams to and from the Internet via the wireless network interface module (column 6, lines 25-29, with the receiver communicating with the wireless network interface); and

Memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to (column 5, lines 35-43, with the software of the device described):

Process data in accordance with a utility application to produce a message (column 5, lines 61-62, where the applications communicate their output);

Process the message in accordance with a transport application to produce a

packet (column 5, lines 62-67, where the application's output is communicated to the transport layer for transfer over a network channel, seen as producing a packet since packets are used to transmit over network channels as seen in column 6, lines 16-19);

Process the packet in accordance with an Internet Protocol to produce at least one of the datagram (column 6, lines 3-15, where the internet protocol is used);

Generate a channel scan request in accordance with the transport application (column 8, lines 4-9, where each network channel is analyzed and column 6, lines 30-32, with the channels being able transfer information relative to the terminal stack, seen as channels that are compliant with the network interface protocol, or transport application);

Determine whether one of the datagrams is being received when the channel scan request is generated (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as a channel scan request);

When the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels (Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as scanning other channels, but not the currently used channel, and column 13, line 67-column 14, lines 3 where the link selector takes a currently used network channel and switches to a different channel, seen as doing a channel scan only when the one channel is active or receiving packets).

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose tuning back to the first channel to transmit data before going back to scanning for more channels. The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency

associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 15**, Spaur et al. and Gwon et al. teach all of the limitations as described above, with Spaur et al. further teaching:

The communication device of claim 14, wherein the memory further comprises operational instructions corresponding to an operating system of a computer, wherein the transport application is included in the operating system (column 5, lines 28-43, where the system is used in conjunction with a mobile unit, seen as having an operating system that includes the functions of the transport layer of the terminal stack).

Regarding **claim 16**, Spaur et al. and Gwon et al. teach all of the limitations as described above, with Spaur et al. further teaching:

The communication device of claim 14, wherein the memory further comprises operational instructions that cause the processing module to determine whether the datagram is being received further comprises:

determining that a source of the datagram and the communication device have established a Transmission Control Protocol (TCP) connection. (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and the protocol used is TCP as seen in column 5, lines 61-67).

Regarding **claim 20,** Spaur et al. anticipates:

A communication device comprises:

Wireless network interface module to provide connectivity to a wireless local area network (WLAN) in accordance with at least one wireless network interface protocol, wherein the WLAN is coupled to an Internet, and wherein the connectivity is provided via one of a plurality of channels of the WLAN (column 6, lines 30-32, and lines 9-15, with a wireless device communicating on a variety of network interfaces, seen as channels, and they can communicate using an Internet protocol, seen as using a interface protocol and being coupled to an Internet);

Processing module operably coupled to transceive datagrams to and from the Internet via the wireless network interface module (column 6, lines 25-29, with the receiver communicating with the wireless network interface); and

Memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to (column 5, lines 35-43, with the software of the device described):

Process data in accordance with a utility application to produce a

message (column 5, lines 61-62, where the applications communicate their output);

Process the message in accordance with a transport application to produce a
packet (column 5, lines 62-67, where the application's output is communicated to the transport layer for transfer over a network channel, seen as producing a packet since packets are used to transmit over network channels as seen in column 6, lines 16-19);

Process the packet in accordance with an Internet Protocol to produce at least one of the datagram (column 6, lines 3-15, where the internet protocol is used);

When a TCP connection is established between a source and the communication device, generate a network interface protocol channel scan request (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels

that might be used is seen as a channel scan request, and the protocol used is TCP as seen in column 5, lines 61-67);

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose hopping back to the first channel to transmit data before going back to scanning for more channels. The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 24**, Spaur et al. anticipates:

A wireless network interface module comprises:

Processing module; and

Memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to (column 6, lines 25-29, with the receiver communicating with the wireless network interface and column 5, lines 35-43, with the software of the device described):

Receiving a scan channel request in accordance with the transport application (column 8, lines 4-9, where each network channel is analyzed and column 6, lines 30-32, with the channels being able transfer information relative to the terminal stack, seen as channels that are compliant with the transport application);

Determining whether one of the datagrams is being received when the channel scan request is generated (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as a channel scan request);

When the one of the datagrams is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels (Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as scanning other channels, but not the currently used channel, and column 13, line 67-column 14, lines 3 where the link selector takes a currently used network channel and switches to a different channel, seen as doing a channel scan only when the one channel is active or receiving packets).

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose tuning back to the first channel to transmit data before going back to scanning for more channels. The general concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency

associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

Regarding **claim 25**, Spaur et al. and Gwon et al. teach all of the limitations as described above, with Spaur et al. further teaching:

The wireless network interface module of claim 24, wherein the memory further comprises operational instructions that cause the processing module to determine whether the datagram is being received further comprises: determining that a source of the datagram and the communication device have established a Transmission Control Protocol (TCP) connection (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and the protocol used is TCP as seen in column 5, lines 61-67).

Regarding **claim 29**, Spaur et al. anticipates:

A wireless network interface module comprises:

Processing module; and

Memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to (column 6, lines 25-

29, with the receiver communicating with the wireless network interface and column 5, lines 35-43, with the software of the device described):

When a Transmission Control Protocol (TCP) connection is established between a source and a destination, receiving a network interface protocol channel scan request (column 6, lines 25-29, where a selected channel is active by transmitting and receiving information packets, and column 13, line 67-column 14, line 3, where the link selector determines the switching from a currently used channel, seen as active or receiving packets, to a new channel, which requires the use of the channel scan request as seen in Figure 5A. Items 170-182, with determining the identity of other channels that might be used is seen as a channel scan request, and the protocol used is TCP as seen in column 5, lines 61-67).

Spaur et al. also anticipates that the scanning of channels happens intermittent with the buffering of delayed information (column 13, lines 8-22, with the link scheduler scanning for future channels and delaying information by buffering the transmission).

Spaur et al. does not disclose hopping back to the first channel to transmit data before going back to scanning for more channels as to reduce latency in packet transmissions of the original network channel during channel scanning. The general

concept of continuing a transmission while performing a channel scan is well known in the art as illustrated by Gwon et al.

Gwon et al. teaches that continued data transmissions could take place during a hand off of network channels and during a candidate node search (column 9, lines 39-45, where the mobile device can still transmit to the old agent using tunnels, seen as using the old channel to transmit data, and also that candidate nodes can be determined before the source node goes down as seen in column 4, lines 13-20, where tunnels connected the mobile node and the candidate nodes are in place before a target node is even chosen, thus the source and mobile node are still communicating as before).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. with transmitting data while performing a search for candidate nodes as taught by Gwon et al. in order to minimize transfer latency associated with network channel handoff as noted in Gwon et al.'s disclosure in column 3, line 66-column 4, line 1.

4. **Claims 4, 6, 10, 13, 18, 23, 27, and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur et al. (US 6,122,514) in view of Gwon et al. (US 6,832,087) as applied to claims 1, 8, 14, 20, 24, and 29 above, and further in view of Saint-Hilaire et al. (US 7,136,364).

Regarding **claims 4 and 10**, Spaur et al. and Gwon et al. teach all of the limitations as described above except for having the internet packet formatted with accordance with an Internet Protocol, such that a TCP/IP protocol packet is formed in accordance. The general concept of formatting a packet in a channel selection system to be in accordance with IP is well known in the art as illustrated by Saint-Hilaire et al. Saint-Hilaire et al. teaches a channel selection system where each packet is formatted as an IP packet (column 3, lines 36-40) and it also uses the TCP protocol (column 1, lines 58-62). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. and Gwon et al. with using the IP and TCP/IP format as taught by Saint-Hilaire et al. in a channel selection system in order to maintain a constant IP presence in a channel selection system as noted in Saint-Hilaire et al.'s disclosure in column 1, lines 38-42.

Regarding **claims 6, 13, 18, 23, 27, and 32**, Spaur et al. and Gwon et al. teach all of the limitations as described above except for having the network interface protocol be IEEE 802.11. The general concept of using IEEE 802.11 in a channel selection system is well known in the art as illustrated by Saint-Hilaire et al. Saint-Hilaire et al. teaches a channel selection system where the network can be an 802.11 network (column 2, lines 60-64). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Spaur et al. an Gwon et al. with using 802.11 protocol as the network protocol in a channel

selection system as taught by Saint-Hilaire et al. in order to use well known wireless LAN technologies as a channel interface to maintain an IP presence as noted in Saint-Hilaire et al.'s disclosure in column 1, lines 38-42 and column 2, lines 60-64.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown et al. (US 6,185,423) discloses a channel scanning process where background scanning is performed while a device is still using a first communication channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam S. Weintrop whose telephone number is 571-270-1604. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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AW 5/8/07

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